Naval Ocean Systems Center
San Diego, CA 92152-5000

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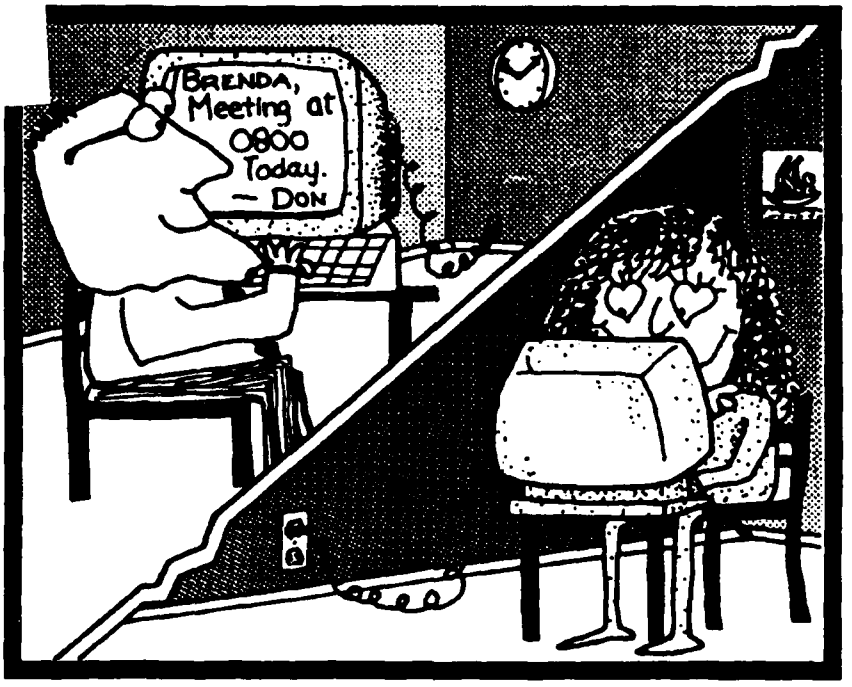
# Electronic Mail Survival Guide



Don Endicott
Brenda Bueche



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## ADMINISTRATIVE INFORMATION

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Although this publication is directed toward NOSC email users, the authors have kept a large audience in mind by focusing on general principles of email communications and etiquette.

Released by
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General concepts of electronic mail communications are discussed, including many advantages and some words of caution about using email compared to traditional forms of communications. The electronic mail programs available at NOSC are described. Some handy email tips and etiquette guidelines are also given so that people can improve their on-the-job effectiveness through the use of email.

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# PREFACE

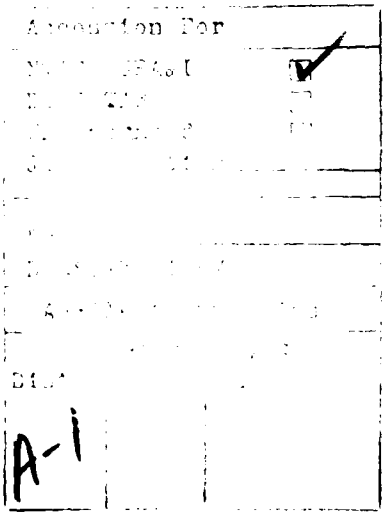
## Why Did We Write This Guide?

Electronic mail, usually referred to as "email," has come into widespread use at the Naval Ocean Systems Center as well as in many government, academic, and business institutions throughout the world. It is often the preferred method of communicating with fellow employees, project sponsors, and counterparts at other facilities because of its effectiveness in facilitating the exchange of messages without the delays and hassles of "telephone tag," and because of its low cost, among other advantages. This survival guide has been written to help you become aware of these advantages and learn a few basic email skills so that you can improve your on-the-job effectiveness through its use.

## How to Use This Guide

This guide was intentionally kept brief so that we could focus on the most important email techniques and so that the information it contains would not be buried in yet another exhaustive computer software manual. It is hoped that you will want to keep a copy near your terminal or PC and refer to it from time to time as your interest and proficiency develop.



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# INTRODUCTION

## Organization

The organization of this Guide will be described briefly.

First, there is an explanation of how to become an email user at the Naval Ocean Systems Center (NOSC) and a list of the phone numbers and locations of the three NOSC Computer Resource Centers (CRCs).

The "What is Email?" section is an introductory section intended as an overview for novice users. The email programs available at NOSC are also described here.

The next section is very important — it describes email etiquette, a code of conduct which may be new to many of you. Since most of us don't have a lot of experience with the social skills associated with email, please spend some time becoming familiar with these rules of the road. They can make a difference in effective communications and reduce the likelihood of misunderstandings or negative reactions to your messages.

A selection of handy tips can be found in the next section, "Beginner's Guide." These are organized to address some key "issues," such as how to answer your mail, how to distribute broadcast messages (messages sent to many people at one time), and how to cope with large volumes of incoming mail. For each issue, at least one tip is offered.

The last section of the body of the Guide presents a few advanced skills you may want to consider as you become more proficient with email and want to take greater advantage of its flexibility and powerful capabilities. A number of these features are described and we indicate where you can go for more detailed instructions and personal assistance.

Appendices A and B are brief cookbooks that demonstrate how an authorized user may enter one of the electronic mail programs and send and receive messages. NOSC's Unix-based email (**msg**) and PC-based email (**umail**) are discussed. You will probably want to refer to this section as a reference until you become familiar with the commands associated with the mailer you intend to use.

Appendix C contains a listing of all General Purpose Computer Center (GPCC) training courses pertaining to electronic mail and indicates who to contact for more information.

On the outside of the back cover, we have summarized from our own lessons learned a set of principles we refer to as "The Ten Commandments for Email Users." Each commandment is discussed at length in the body of the survival guide. We hope you find these a helpful reminder of how to use email effectively.

## Feedback

The General Purpose Computer Center is always open to suggestions for how to improve its products and services. If you would like to share any tips you have discovered through your own email experiences, please contact either of the authors and we will attempt to incorporate tips of general interest in future releases of this document. We can be reached via email to *endicott* or *bueche*. You may also call the Computer Resource Center and give them feedback. See the following section for CRC phone numbers.

# HOW TO BECOME AN EMAIL USER AT NOSC

In order to become an electronic mail user, you must have a computer account and a *userid* and password. The computer you use to read your electronic mail is called your "mailhome" computer. For help in deciding which electronic mail program to use, read "What is Available at NOSC" in the next section, "What is Email?", or contact the CRC. To get an account on one of the GPCC minicomputers, contact the CRC.

The GPCC has a staff of consultants working in the CRCs Bayside, Topside, and Hawaii. The consultants will answer any questions pertaining to the GPCC, including questions on policies, computer usage, and technical details on the Unix, VMS, and MS-DOS operating systems. You are encouraged to contact the CRC if you need further assistance in using any electronic mail program. The CRC consultants may be reached at the following locations:

| | |
|---|---|
| Bayside, Bldg. 204, 553-2247/553-2250 | Electronic mail address: *crc* |
| Topside, Bldg. 33, Rm. 2200, 553-2268 | Electronic mail address: *crc* |
| Hawaii, Bldg. 1181, 254-2171 | Electronic mail address: *coughran* |

Classes related to the use of computers at NOSC are held in the Computer Classroom, Bayside, Bldg. 173. See Appendix C for further information.

# WHAT IS EMAIL?

## Overview

Email is an electronic form of communication between users of computer systems. A user types a message from the PC or computer terminal keyboard into the email system, which in turn routes it to the addressees. The recipients receive their mail in their own personal "mailboxes," which are computer files on one of the host computers. Email messages can also be forwarded, replied to, or broadcast to many users at once. Specific procedures for the different email programs available at NOSC will be described later in this guide. In this section, it is our goal to convey some of the unique attributes of email which make it a powerful resource, one which should be used with care to ensure its effective use.

To send or receive an email message requires that you interact with an email program on a computer which is shared with the intended recipients or is networked to other compatible computers (such as *Cod, Manta,* and *Marlin*). Email at NOSC is also possible from personal computers connected to the Center-wide local area network known as the Generalized Communications Backbone or GCB.

The original message may be typed directly from the keyboard, as you would type using a typewriter. Typically, email messages may be typed with a text-editing program that allows you to make changes to a document easily, or they may be typed without a text editor. Email messages may also incorporate other previously created files containing text , such as a progress report or a meeting agenda. Messages are read by calling for them to be displayed on the PC or terminal screen one at a time. After a message is read, it can be retained in the mailbox for later action or reference, answered, forwarded to others, or stored as a computer file. It may also be printed for filing or distribution.

An electronic message, as shown in Fig. 1, is characterized by a line showing who sent the message, who the addressees are, the list of persons receiving copies, the subject, a date, and the text of the message. Messages are stored in your mailbox in the order they are received at your host computer, which is referred to as your "mailhome."

To: *bueche*
Cc: keil
Subject: Email Survival Guide Review
Date: Thu, 30 Jun 88 08:04:13 PDT

Brenda-
I am nearing completion of my review of the latest draft of the "Email Survival Guide." I will pass it along later today to Tenny for his review. We should try for making the suggested changes by the end of next week (8 July). I want to provide Ivor with something a bit more complete and enable him to report on the project status to the Genboard.

Let's get together today and go over the illustrations and photographs. Thanks.
-Don

**Figure 1.** Sample email message.

## Attributes

Email differs in many important ways from our more conventional methods of communicating, such as face-to-face discussions, telephone conversations, or formal correspondence. Borrowing from an excellent pamphlet on email ethics and etiquette prepared by the Rand Corporation (Ref. 1), we can list a number of attributes of email. These include:

- Speed (to generate a message, to send one, to respond to one)
- Permanence (of the resulting message, with respect to both the sender and the recipient)
- Cost of distribution (to an individual or group)
- Organization's desire and ability to filter, channel, record, and control messages for the perceived good of the organization
- Experience (needed by an individual, with the medium, in order to know how to use it more effectively)
- Accessibility
- Security
- Accountability

We recommend the Rand report for a more detailed exploration of each of these points and will limit this discussion to an overview.

### *Speed*

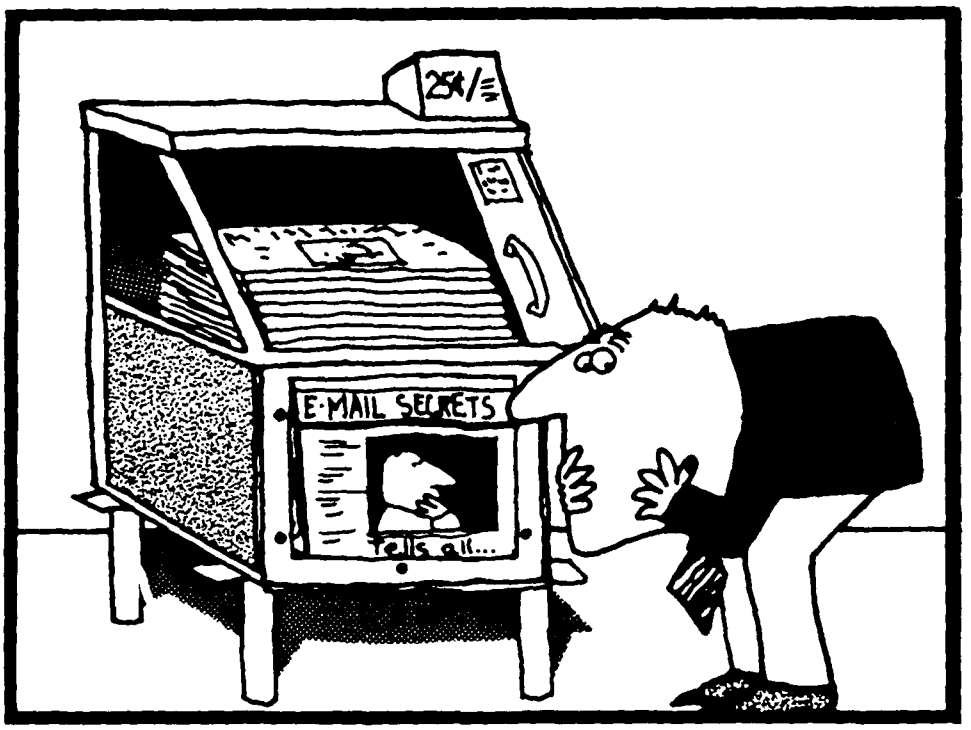
Email speed is nearly as fast as a telephone call if the party being called is there and available. It is estimated that the average success rate of an initial phone call is about 30 percent, resulting in the phenomenon of "telephone tag." Face-to-face discussions are often the fastest and best method unless there is travel involved, such as to another office, building, or city. Interoffice memos and regular (and guard) mail may take from one to several days. If the email parties have conditioned themselves to check for messages frequently, email communication is usually achieved within a matter of hours.

### *Permanence*

Email is quite different from any of the alternative communication approaches just described in that it appears to be temporary but may actually be quite permanent and retained by many individuals or organizations. Messages can be saved to files, saved on tapes and archived, printed and filed, *altered* and then printed (thereby looking authentic while actually having been modified), and forwarded and reforwarded to third parties unknown to the sender. Several ground rules have been proposed to remind email users that they cannot really control where their messages may go and whether or not the messages will be retained. These rules include avoiding saying anything that would embarrass you or your organization or that you would not want to appear as a front page headline in a national newspaper.

### *Cost*

It's harder to determine the cost of email than, say, the cost of a telephone call or a letter. The computer resource costs, telecommunications costs, software maintenance costs, and other costs associated with using email are difficult to attribute to a per message cost. Generally, email systems are associated with and subsidized by other computer and networking applications. At NOSC, email is provided at no direct charge to users.




### *Organization's Ability to Control the Medium*

Email may be distributed and forwarded and answered so casually from your keyboard that conventional organizational protocols and chain-of-command channels are often circumvented. In this sense, it has been described as a "democratic" medium in which all participants are equals. It is just as easy to send a message to our technical director as it is to one of your associates. This freedom and convenience of expression has contributed significantly to email's popularity. Unfortunately, this freedom, when used indiscriminately, can result in supervisors and secretaries being "left out of the loop" and may also produce a flood of unscreened and possibly inappropriate messages cluttering up our mailboxes as well as the mailboxes of our project leaders, line supervisors, and senior managers.

The NOSC Office Automation (OA) Project, as part of its Center-wide mail efforts, has developed naming conventions and recommended methods for distributing mail to organizational codes and groups. To date, however, the procedures and protocols for organizational routing, including who should perform filtering, gatekeeping, or other forms of restraint, are presently left to individuals and their organizations.

### *Experience*

Email is a new form of communication for which our social experiences have not fully prepared us. In the Rand report (Ref. 1), it is pointed out that people have had 50,000 years to develop speech habits and gestures, 5,000 years to refine writing techniques, and 100 years to learn how to use the telephone effectively. It is also noted that by the time we are adults, we have spent much of our lives learning the appropriate rules of behavior as well as the effective way to communicate in each of these media. Although email has the characteristics of a combination of these communication methods, it is not really equivalent to any of them. Because of its inherent informality, its easy and rapid distribution capability, and its ability to transmit potentially permanent messages, it is such a different overall form of communication that the "rules" and etiquette for its effective use are still evolving. Problems tend to arise when messages and responses are emotional or misunderstood or when we are frustrated with a barrage of insignificant or irrelevant messages.

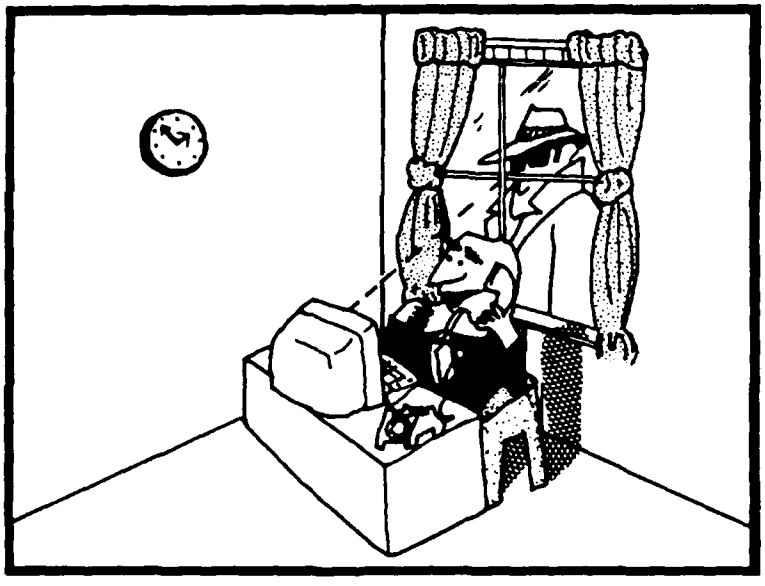
### *Accessibility*

Email can be sent at a time convenient to the sender and read at a time convenient to the recipient without the frustrations of "telephone tag" or time zones differences.

### *Security Considerations*

As mentioned earlier, it is not possible for you, as the originator of an email message, to completely control or know the routing of your messages. It is also important to be aware that the GCB and the Defense

Data Network (DDN) to which we are connected are limited to unclassified message traffic. For these reasons, it is imperative that you do not use email to send any classified information, and it is advisable to refrain from sending sensitive or potentially embarrassing messages.



### *Accountability*

When you send an email message, a record of your correspondence is kept on the computer until the recipient deletes it. It you want to be able to account for a message you send, you should also send a copy of the message to yourself so you will have proof of the correspondence for later audit purposes. Additionally, you will have a record of who received the information. This is helpful whether you are the sender or the recipient of the message. Typically, there are no such accountability features in face-to-face and phone communications.

This accountability attribute can also be a disadvantage. You will want to be very careful of what you say in your message since recipients may forward the message to anyone or save a hard copy of the message for years.

## What Is Available at NOSC?

There are three principal email systems in use at NOSC. You should choose the one that best suits your needs. The first is the PC-based product, micromail (**umail**), for IBM PC's and other MS-DOS compatibles. Micromail was developed at NOSC under sponsorship of the Office Automation Project. PC users who would prefer to confine all their computing to their PC should consider using micromail. The second is the Unix-based **msg** system that resides on the GPCC VAX network. If you do most of your computing work on a GPCC Unix computer, you may wish to use **msg**. It is available at no cost to every NOSC employee, with the single requirement that you become an authorized GPCC user. The third is **mail,** which runs under Digital Equipment Corporation's VMS operating system on a number of department and project resources, such as the Code 80 service center. A gateway between the three environments is available as long as the VMS resources are connected to the GCB and are running the Wollongong program or similar communication software. If you use a VMS computer, such as the GPCC computer *Wahoo*, you may be using the VMS mail program, **mail**.

Appendices A and B will be helpful if you have never used electronic mail and need to learn the basics, such as reading and sending messages. Refer to Appendix A, PC-User's Cookbook for Email, for detailed information on how to use the micromail program. Refer to Appendix B, Minicomputer-User's Cookbook for Email, for detailed information on the Unix mail program, **msg**. Although the VMS electronic mail program, **mail**, is available, the GPCC does not recommend it and does not provide free VMS electronic mail services. (Both **msg** and **umail** are free.) If you use VMS **mail**, contact your VMS system administrator for assistance.

At NOSC, the GPCC Training Center teaches courses in the mechanics of email, and some general guidelines for using it effectively are described in Appendix C. However, what is true for individual users, such as yourself, is true for the organization as a whole: we are still learning the best skills to adopt as well as the bad practices to avoid. The "Email Etiquette" section, which follows this section, is intended to suggest some rules and practices you may find helpful in getting your messages across with a minimum of bother and misunderstandings.

# EMAIL ETIQUETTE

Our society has a set of rules and guidelines for each of the various ways we communicate with others. We use particular formalities when we send out memos and letters, we answer the phone and ask to speak to others on the phone in a certain way, and we have other unspoken rules during business meetings or when speaking to an individual face-to-face. Communication by computer is new to almost everybody, and there are certain aspects that can make it a frustrating experience until you get used to them. Messages sent by computer can often be misunderstood, especially because the recipient of a message does not have body language or voice inflection feedback to help interpret the intent of the sender. Like every other form of communication, a particular etiquette should be followed when using electronic mail. Because email is such a new form of communication, the rules of email etiquette are still evolving. References 1 and 2 are excellent references on the subject of email etiquette. Some guidelines or rules for using email are listed below, to help make email communication as effective and enjoyable as possible.

## COMPUTER SYMBOLS

### *Smiley Face Variations*

| | |
|---|---|
| :) | smiley face |
| :-) | smiley face with nose |
| ;-) | winking smiley face |
| :( | unhappy face |
| :-} | grinning face |
| :-O | surprised face |
| :-{ > | hairy face (mustache and beard) |
| 8-) | smiley face with glasses |
| :^) | smiley face with funny nose |
| P-) | smiley face with a patch over one eye |
| :-# | smiley face with braces |

1. When in doubt, it is better to be too formal than too informal. There is a lack of clear social status and role expectations in email, and people often are very informal, regardless of who they are dealing with. You should generally treat others with the same level of formality that is appropriate in other written forms of communication.

2. Read and respond to all messages as quickly as possible.

3. Keep your mailbox organized by disposing of out-of-date messages.

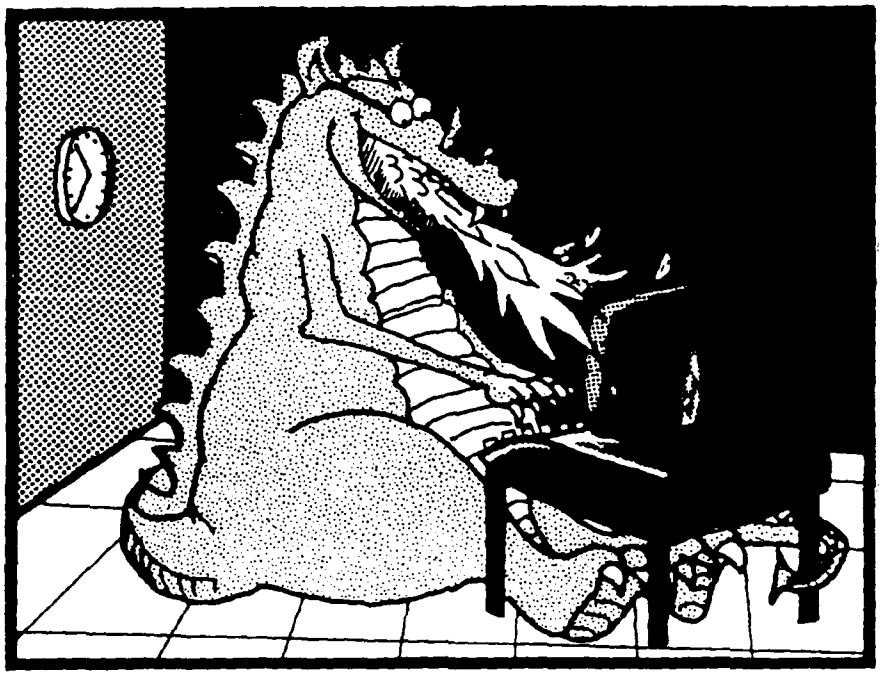
4. When responding to an article or message, make a brief reference to the original article or include the original message with your reply. This will help the receiver remember his or her original message.

5. Follow up or precede complicated computer messages with a face-to-face meeting or phone call to clarify obscure points.

6. Never forget that the person on the other side is human. If you are upset at something or someone, wait until you've had the chance to calm down before responding so you do not later regret your emotional response. People tend to get much more aggressive in expressing their anger over email than in person, a concept called "flaming."

7. Be careful with humor or sarcasm. Humor is not communicated very well in writing, in the absence of voice inflections and body language, and it is easy to end up offending someone. If you must use humor, it's usually a good idea to remind people you are being funny, by using the popular computer symbol for a smiley face: :). Other computer symbols (such as those on the preceding page) can be used to convey different sentiments or to emphasize a particular attitude. Several of these symbols are in widespread use, but others are rather obscure. Have fun with them, but make sure that they neither confuse the reader nor detract from the meaning of your message.

8. If you receive a message intended for another person, stop reading it as soon as you realize it is not meant for you. Then either send it back to the originator explaining that he or she had the wrong email address, or send it on to the correct recipient, if you know who that is.



9. When visiting coworkers, don't read mail messages on their computer screens; you wouldn't dream of reading paper mail stacked on their desks, so use the same courtesy regarding email.

10. Create single-subject messages whenever possible.

11. Use descriptive subject-line titles so that the recipient can determine the topic at a glance.

12. Write in complete sentences. You may find it quicker to write phrases rather than sentences, but your meaning could be mangled, and it may take your readers much longer to read and understand your message.

13. Don't use all upper- or lower-case letters, since this results in a text more difficult to read than one with the conventional mixture of upper- and lower-case letters.

14. Assume that any message you send is permanent. Remember, too, that messages can easily be forwarded, so be careful what you say.

# BEGINNER'S GUIDE

This section describes some tips you may find helpful in your daily use of email. They have been selected to illustrate some of the issues and to correct some of the problems described in the etiquette section. First, an issue is identified and then a list of tips is suggested.

## Addressing Mail

*Tips*

1. Distribute "information only" copies discretely and express clearly who should respond (usually those on the "To:" line) and who are simply being kept informed (usually those on the "Cc:" line).

2. Keep the list of recipients and carbon copy "Cc:" addressees to a minimum.

3. Focus on and identify the person or persons who should act on or respond to your message.

## Composing the Message

*Tips*

1. Determine your objectives before you begin.

2. Perhaps jot down on paper your main points to ensure that they are all covered; you may wish instead to type your main points at the top of the message you are composing and then delete them.

3. Use an editor to facilitate changes or corrections.

4. Review the final version for content and tone before sending. Once it is sent, you can't retract it.

## Responding to Mail

*Tips*

1. Limit your response to the individuals who really need an answer. Avoid initiating a message "snowball" by automatically sending your response to too many "Cc:" recipients.

2. Before answering, make sure you understand the contents and intent of the message.

3. Slow down and carefully consider the appropriate response, especially if you feel strong emotions about the contents, the writer, or the manner of its presentation. Reread your response before sending it, since it is much easier to tone down a draft than to retract statements which you have already sent. Avoid "flaming," a term which means an inappropriate expression of emotions sent via email when you are angry.

## Coping with Large Volumes of Email

*Tips*

1. Check your mailbox frequently and quickly dispose of messages which do not require action or further reference. Keep your "in basket" small.

2. Avoid widespread broadcasting or extensive distribution of responses or forwarded messages unless special circumstances warrant such actions. Be considerate and recognize that your broadcasts may be "junk mail" to someone else. Encourage your associates to reciprocate in kind.

3. If you don't want to receive certain messages, tell the originator to stop sending them!

## Knowing When to Print Messages

*Tips*

1. Refrain from printing every message, since many can be dealt with from your PC without further action required. Save a redwood and keep your file cabinets from overflowing.

2. Consider printing longer messages (more than one screenful), especially those which require your review and markup, since most of us are initially more skilled and effective using pen and paper for such activities.

3. Consider printing significant messages which constitute policy statements, document an agreement, or otherwise establish an understanding which may be of long-term value. Of course, formal written procedures, such as memoranda and official letters, should normally be used for this purpose.

## Protecting Your Mail

*Tips*

1. Don't share your password with anyone, since it is not otherwise possible to prevent others from reading or sending mail in your name. It is also a security violation.

2. Don't leave your PC or terminal unattended, even for a short period, if you are connected to any mail system. This is also a security violation.

3. If you are using a PC-based mail program, make regular backups of your hard disk.

## Looking Up Addresses

*Tips*

1. Before you can send email to another user, you need to know the recipient's mail address. The address for NOSC users is simply their *userid*s (the names they use to log on with). Both the hard-copy and on-line NOSC phonebooks list the *userid*s of people with computer accounts.

2. There are several ways to find a person's *userid*, including using the phonebook (**pb**) command. Type **pb lastname** at the Unix, VMS, or MS-DOS prompt. If you type only **pb**, you will get prompted for more information; there are options other than the last name. If you use the **pb** command on your PC, you must obtain a copy of the PC **pb** program from the CRC.

3. Many of you will never need to send email to users at other activities, but for those who do, help is available for finding their addresses if they are either on or gatewayed to the DDN. There are ways to find the *userid*s, including using the **whois** command or the NIC/Query program. A document called "Introduction to the Defense Data Network" is available. You may also wish to take the *Introduction to the DDN* course offered by the GPCC. For more information or guidance, contact the CRC.

# ADVANCED GUIDE

## Saving Incoming Messages

There will be times when you will want to save a message that you have received — so that you can edit the contents and then do something with it, or put the message into a different directory or mailbox for better organization, or file it in your archives by subject or project for later reference. Whatever the reason, you may save a message into a normal system file by using **msg** or **umail**. The commands vary depending upon which mail system you are using. To save a message to a file from within **msg**, use the command **m** for **move**, or **p**, for **put**. (The command **put** keeps a copy in your mailbox.) To save a message to a file from within micromail, use the **saVe** command, **v**. In each case, you will be prompted to provide a filename.

## Saving Outgoing Messages

You may sometimes want to save a copy of the messages that you send to others, either to refresh your memory or to have available for audit purposes. There is a file function that keeps a chronological record of all mail you originate. You can selectively retain the messages to avoid clutter. Periodically, you may wish to archive messages onto floppy disks. The name of the Unix chronological file is *.msgchron*. There are several options to the chronological file, and you can specify what you want by making changes to the *.msgrc* file. You should have the following line in your *.msgrc* file: "CRN:n."

If you wish to enable the chronological file so that ALL outgoing messages are saved (instead of the default of only the most recent message), change the n to y:

CRN:y

The **umail** chronological file is *chron* (unless you change the name). You can specify what you want by adding the following line in your *umailrc* file:

record: chron

If the line is already there, make sure that the pound sign (#) has been removed. The *chron* file will be saved in your mail directory and can be examined like any other mailbox. As each message is sent, you will be asked whether or not to save a copy of it.

## Using a Text Editor

If you use electronic mail extensively or send lengthy messages, you will probably want to use a text editor to compose your messages. Although you may compose a message in **msg** or VMS **mail** without an editor, you cannot go back and retype a line other than the current one. Thus, if you make a mistake, you must abandon the message and start over from the beginning. Unless you are a perfect typist, it may take many tries until you type the message correctly. This can be annoying and time-consuming, so most people prefer to use editors.

Text editors generally allow you easily to scroll up and down a long document; delete and insert text; move up, down, right, and left within a document; and make changes to the document. Two popular Unix editors are **vi** and **red**. VMS users may wish to use the EDT editor. Unlike **msg** and VMS **mail** users, **umail** users are required to use a text editor. Essentially any PC editor can be used. If you do not know a PC editor such as WordStar or WordPerfect, you may wish to choose the Easy Editor when you are installing micromail. The Easy Editor is free from the CRC and is very simple to use but has a limited number of cursor positioning, insertion, deletion, and other editing commands. The editor you choose will be called up each time you wish to compose a message.

## Importing Files

You may often find that you want to send someone a message that includes the text of a file that you already have. Instead of retyping the text of the file when you are composing the message, you can import the file by using the file-import capabilities of the text editor. If you are using **vi**, for example, you would use the command **:r** to read in the desired file into the current message. The WordStar command is **^KR**. The ^ stands for **CTRL** and means you should hold down the **CTRL** key while typing the letters. The file import command for WordPerfect is **Retrieve**. To use this, you will need to hold down the **Shift** key and then press **F10**. You will be prompted for the name of the file you would like to import. You will need to familiarize yourself with the file-import command for the text editor that you use. The CRC can answer your questions and demonstrate file-importing procedures for most of the popular editors.

## Using Mailing Groups

If you frequently send mail to the same group of people (perhaps members of your code or a certain project), you can establish a personal mailing group containing the *userid*s of all the people you wish to be included. Then, instead of having to type the *userid* of each person, you can send mail to all members of the mailing group by simply typing the name of the mailing group on the "To:" or "Cc:" line. Remember when creating mailing groups to add only those persons who should be informed of the contents of the message; avoid contributing to an email "blizzard."

In addition to being able to create personal mailing groups, a variety of mailing lists already exist that can be accessed by all GPCC users. These mailing lists include user groups, organizational groups such as "divheads" or "90staff," and NOSC service group addressees such as "gpcctrain." In order to see what mailing lists exist, type **mailbox -v** on any GPCC Unix computer at the prompt.

One problem to be aware of when using personal mailing groups (instead of established system mailing lists) is that addressees who answer a message and include the mailing group on the "Cc:" line may not have access to the mailing group file so the *userid*s of the people in the group


won't be known by the computer and the mail won't be sent. If you receive mail because you are in a particular mailing group you have not created, you can tell who else is in the group by looking down at the very bottom of the message (if the original message was composed with **msg**). So if you want to respond to all members of the group, you can type in all the *userid*s separately, create your own mailing group of those names, or use your editor to cut the names and paste them on the "Cc:" line. Detailed instructions for creating mailing groups with the Unix or PC mail programs are given below.

### *Unix* (**msg**)

1. Create a file with an editor such as **vi** or **red**. Give it a meaningful name, such as *tuesmtg*.

2. Put all the *userid*s of the people in the mailing group in this file. Each *userid* can be listed on a separate line. No punctuation marks are necessary.

3. When you wish to send mail to the mailing group *tuesmtg*, address it to *tuesmtg:*. Make sure to include the colon after the filename of the mailing group. The colon is not part of the filename. Rather, it is an indicator that more than one recipient is being addressed under one filename.

### *PC* (**umail**)

1. Change to the directory that contains the *umailrc* file (probably *bin*). You may do this by typing **cd bin** at the MS-DOS prompt.

2. Edit the *umailrc* file with the Easy Editor or your favorite PC editor. Add the following line in the file (it doesn't matter where, although you may want to put it below the "#alias:" line):

```
alias:  aliasname          userid1,userid2,...
```

The aliasname is whatever meaningful name you want to give to this particular mailing group. If you have more *userid*s than will fit on one line, you can continue the *userid*s on the next line. The second and all subsequent lines must begin with a space or tab, as shown below:

```
alias:  tuesmtg            userid1,userid2,userid3,
                           userid4,userid5,...
```

3. To send mail to the mailing group *tuesmtg*, you simply need to address it to *tuesmtg*.

# REFERENCES


1. Shapiro, Norman Z., and Robert H. Anderson (1985). *Toward an Ethics and Etiquette for Electronic Mail.* Prepared for the National Science Foundation, R-3283-NSF/RC. Rand Corporation.

2. Fleenor, C. Patrick, and Robert E. Callahan (1986). *Computers on the Job: Managing the Human Side.* Random House, Inc.

3. Clements, M. (1988). *Introduction to the Defense Data Network*, NOSC Technical Document 940.

4. Computer Sciences Corporation (1986). *Introduction to NOSC Electronic Mail, Revision 1,* NOSC Technical Document 955.

5. Hall, H. R., and B. Bueche (1988). *Micro-Mail User's Guide*, NOSC Technical Document 1280.

# Appendix A

# PC-USER'S COOKBOOK FOR EMAIL

## USING MICROMAIL (PC)

### General

When a user runs micromail **(umail)**, a connection is made over the General Communications Backbone (GCB) between the PC and a Unix mail server. A program running on the minicomputer checks for new mail messages, and if it detects any, transmits them to the waiting **umail** program running on the PC. Then **umail** deposits the mail messages into a directory on the PC's hard disk. Similarly, **umail** transmits messages composed on the PC to the minicomputer (Fig. A-1).

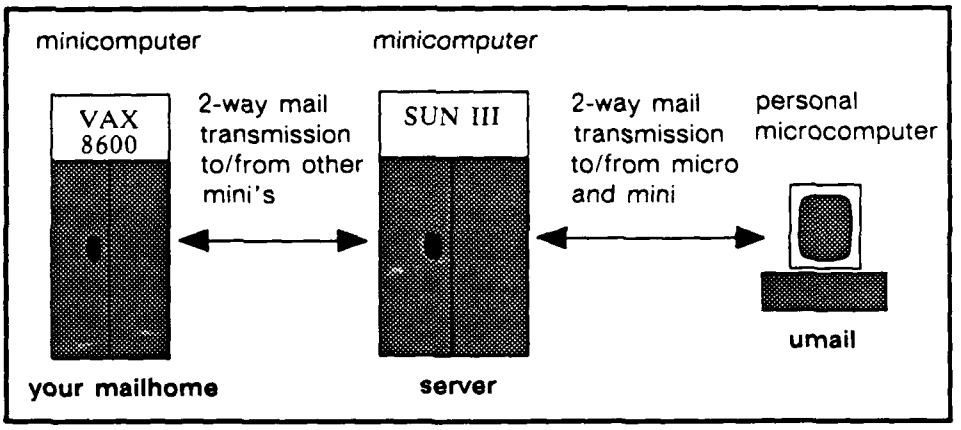



**Figure A-1.** Two-way mail transmission.

### *Getting In and Out of umail*

1. You can enter the micromail program by typing **umail** at the MS-DOS "C:>" prompt and pressing **ENTER**.

2. Micromail provides a commands menu, which makes up the top two lines of the screen, and a headers-list menu (Fig. A-2). The commands menu lists all the micromail commands. Each command can be executed by typing in lower-case the upper-case letter that appears within the command name. For example, to execute the **Send** command, type **s**. To execute the **eXit** command, type **x**. There is no need to press the **ENTER** key. The best way to understand the commands is to try them.

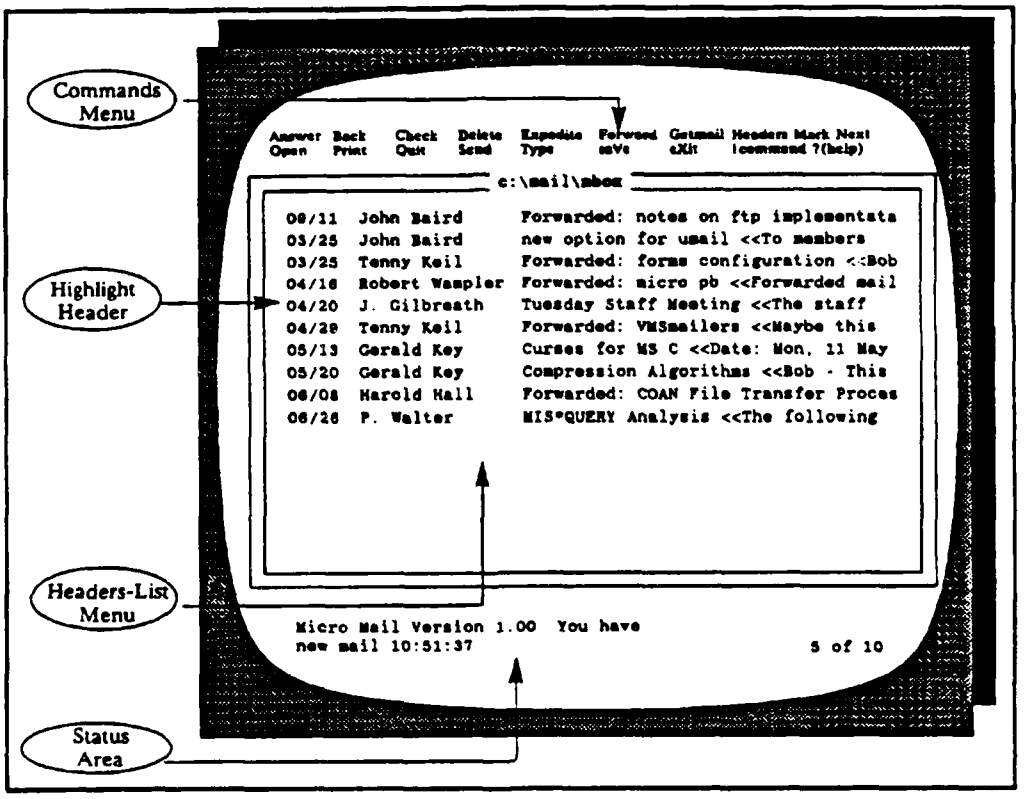



**Figure A-2.** Micromail headers screen.

3. The headers-list menu contains headers for all messages in your mailbox. The first time you enter **umail**, you will have no messages in your mailbox. If you have any new messages, you can download them onto the PC with the **Get** (**g**) command.

4. Like **msg**, **umail** has a "help" command. Type **F1** for help. Each command is briefly described. Some of the keypad keys have special functions in **umail**. The up and down arrows can be used to move the highlight from one message to another. Some of these keys are described in "help." Micromail commands that are used to affect a particular message can only be performed on the currently highlighted message.

5. You may also execute MS-DOS commands (like **dir** or **type**) while you are still in **umail** by typing **!command** and then **ENTER**. For example, type **!dir** and then press **ENTER** to get a directory listing.

6. To read the message currently highlighted on the headers-list menu, simply press **t** for **Type**. If you then want to read the next message without returning to the headers page, you can press **n** for **Next**. Similarly, you can type **b** for **Back** to read the previous message. If the message is too long to fit onto one screen, use the **PgDn** key on the keypad to read the next screenful. Likewise, you can press **PgUp** to read the previous screen of text.

7. To send a message using **umail**, type **s**. You will be prompted for the addressees' *userid*s ("To:"), the subject ("Subject:"), and the *userid*s for carbon copies ("Cc:"). The editor you chose when configuring micromail is invoked. (Easy Editor is the default.) Compose your message in the editor following the "Text:" header line. Do NOT edit the "Text:" header line. When you finish editing the message, a prompt is displayed that asks whether you would like to abort, edit, send the message now, or send later. Make your selection as appropriate.

8. You will periodically want to do some housekeeping and delete unwanted messages. To delete the currently highlighted message, simply press **d**.

9. To leave **umail**, use the **Quit** (**q**) command. Type **q** and this will return you to the MS-DOS "C:>" prompt.

An *Introduction to Micro-Mail* course is offered by the GPCC. See **Appendix C for a description of the course.**

# Appendix B

# MINICOMPUTER USER'S COOKBOOK FOR EMAIL

## USING msg (UNIX)

### Logging In (Unix)

Before you may use the electronic mail program **msg**, you must have a computer account, and a *userid* and password on a GPCC Unix computer. You may send mail from any GPCC Unix computer you have an account on, but you may only read mail from your "mailhome" computer.

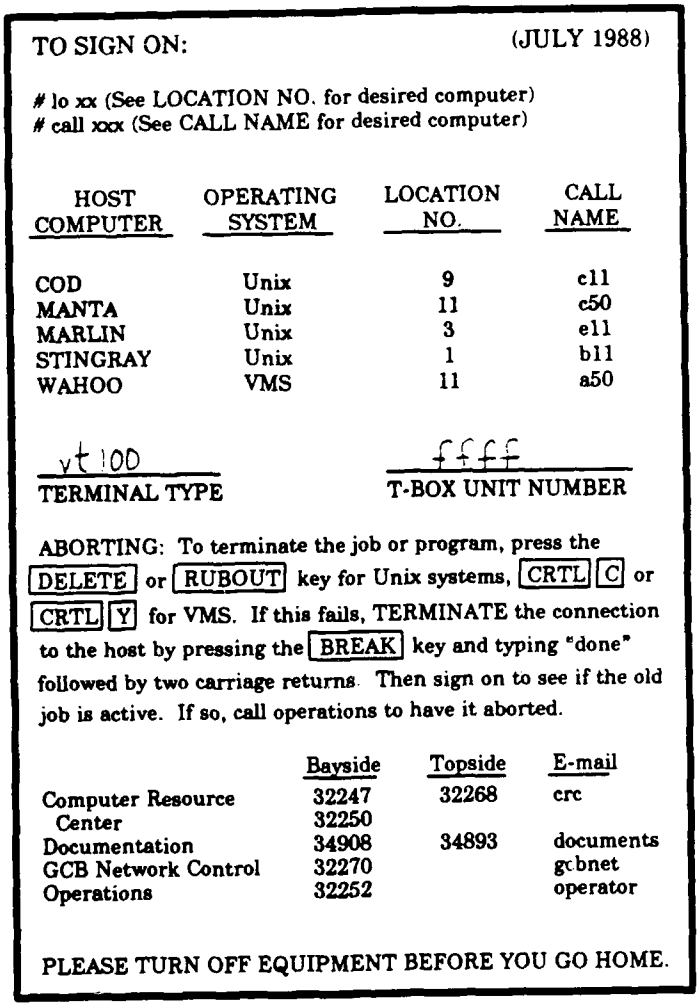
1. Turn on your terminal or PC. PC users must make sure that the "terminal" program is installed on the PC before proceeding. You will need to have the terminal program configured for either an h19 or a vt100. The terminal program is available from the CRC, and they will properly configure it for you. If the terminal program is installed, type **terminal** at the DOS prompt (e.g., C> **terminal**) and press **ENTER**.

2. Press the **ENTER** key on your keyboard until you see the pound sign (**#**), which is the T-box prompt.

3. Type the letters **lo** and press the **Space Bar**. The rest of the word "location" will be displayed (**lo**CATION), plus a required space. Select the correct location number of the computer you want to use (generally, your "mailhome" computer) from the small GCB card on your terminal or PC. Figure B-1 is a sample GCB card. For more information, call the CRC.

4. Another pound sign will appear under the first pound sign. Type **ca** and press the **Space Bar**. The rest of the word "call" will be displayed (**ca**LL), plus a required space. Again, refer to the GCB card and choose the correct call number associated with your "mailhome" computer. If you wish to call the computer *Marlin*, the location number is 3 and the call number is e11 (as shown in Fig. B-1), and you would type the following:

**#lo**CATION **3**
**#ca**LL **e11**



TO SIGN ON: (JULY 1988)

# lo xx (See LOCATION NO. for desired computer)
# call xxx (See CALL NAME for desired computer)

| HOST COMPUTER | OPERATING SYSTEM | LOCATION NO. | CALL NAME |
|---|---|---|---|
| COD | Unix | 9 | c11 |
| MANTA | Unix | 11 | c50 |
| MARLIN | Unix | 3 | e11 |
| STINGRAY | Unix | 1 | b11 |
| WAHOO | VMS | 11 | a50 |

vt100 — TERMINAL TYPE

ffff — T-BOX UNIT NUMBER

ABORTING: To terminate the job or program, press the DELETE or RUBOUT key for Unix systems, CRTL C or CRTL Y for VMS. If this fails, TERMINATE the connection to the host by pressing the BREAK key and typing "done" followed by two carriage returns. Then sign on to see if the old job is active. If so, call operations to have it aborted.

| | Bayside | Topside | E-mail |
|---|---|---|---|
| Computer Resource Center | 32247<br>32250 | 32268 | crc |
| Documentation | 34908 | 34893 | documents |
| GCB Network Control | 32270 | | gcbnet |
| Operations | 32252 | | operator |

PLEASE TURN OFF EQUIPMENT BEFORE YOU GO HOME.

**Figure B-1.** Sample GCB card.

5. A message indicating that your call to the host computer has been completed will be displayed on the screen. (If you get a message such as "Unable to open session" instead of "Call completed," repeat the above steps. If this does not work, either the computer ports are busy or the computer is down. Please call the CRC at 553-5565, and we will try to correct the problem as soon as possible.)

6. Enter your *userid* in lower-case letters on the "login:" line and press the **ENTER** key.

7. Type in your password at the "Password:" prompt and press **ENTER**. If you get an error message, you may have typed in your *userid* or password incorrectly. Try again.

8. If you have more than one account (representing a job order number) assigned to you for tracking computer usage charges, you will be prompted to type which account you wish to charge your computer session to. If you have only one account, you will not be prompted and will not need to type anything. As an example, if you have more than one account and you wish to change your computer session to account "aab," you would type the following:

Account: **aab**

9. Various information, including the last time you logged in, will be displayed on the screen. If email messages have arrived since the last time you logged in, the message "You have new mail" will be displayed. Next you will see "TERM = (vt100)." If your PC emulates a vt100, simply press the **ENTER** key. If it emulates another terminal type (your GCB card should have the correct terminal type written on it), then type it in and press **ENTER**. The most common terminal type is a vt100. If you have a PC that emulates an h19, you would type the following:

TERM = (vt100) **h19**

10. You will then see the time, the number of users on the computer, and other information. On the next line, the percent sign (%) is displayed. The percent sign tells you that you are in the Unix operating system and are ready to enter the mail program **msg**.

## Getting In and Out of msg

1. After logging in, you can enter the mail program by typing **msg** after the Unix % prompt and pressing the **ENTER** key:

% **msg**

2. When you log into mail at the intermediate level (the default), you will see the **msg** "ENTER COMMAND:" prompt which tells you that you have successfully entered the **msg** program. All commands that you type now must be **msg** commands to be recognized.

3. There are three levels of use in the **msg** program: tutorial, intermediate, and experienced. Tutorial and intermediate levels will provide you with a menu of commands from which to choose. At the experienced level, commands are not shown on the screen. You may access the options by entering a question mark (?) or an **i** at the **msg** prompt. New users are installed at the intermediate level of **msg**.

4. For information on any of the options in the menu, enter a question mark, followed by the command you want to know about. For example:

ENTER COMMAND: **? header**

The best way to understand the function of a command is to try it.

5. In order to read your mail, press the **ENTER** key to see the next message. If you know the number of the message you would like to read, type in that number followed by **ENTER**. To see a headers listing of all your messages, you should type **h a** at the "ENTER COMMAND:" prompt. Figure B-2 is a sample of message headers in **msg**. Typing **h a** will enable you to see your messages and find the message number of the message you wish to read or perform some other function on. If your message is too long to fit on one screen, you will be prompted to press **ENTER** to read the next screenful of text.

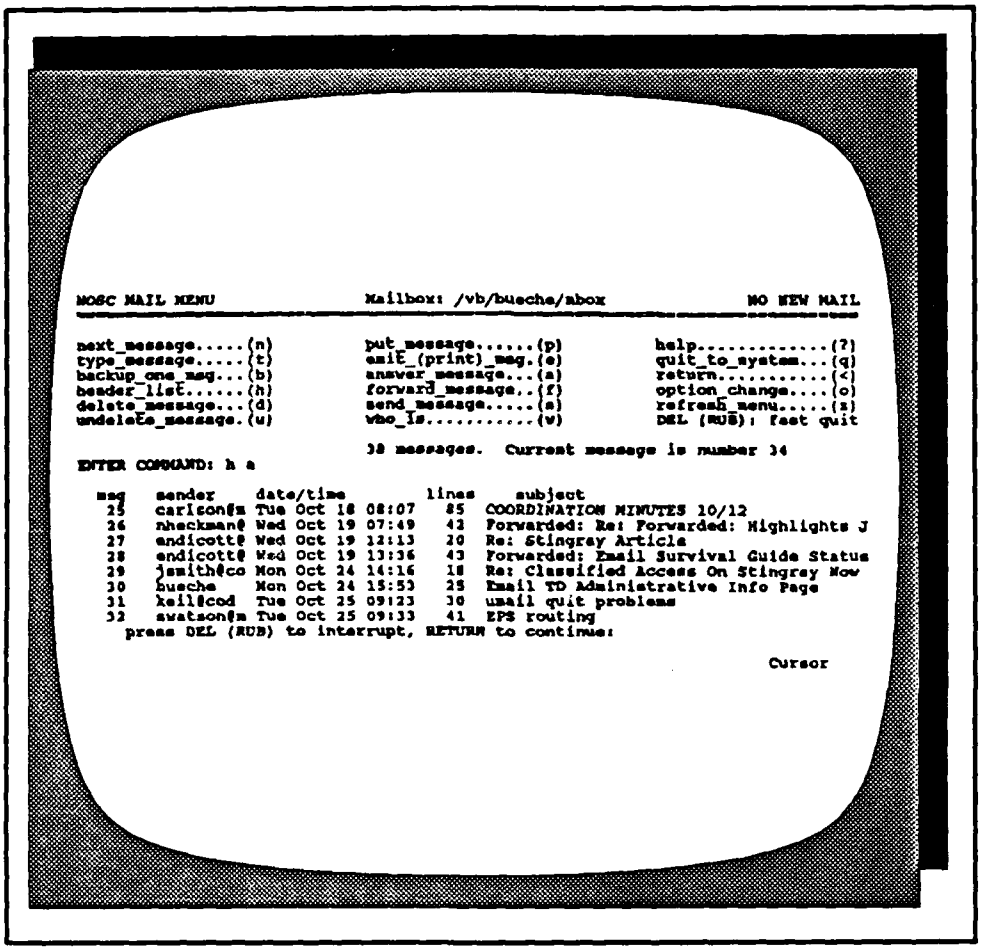



**Figure B-2.** Headers screen for **msg**.

6. To send a message, type **s** for send at the "ENTER COMMAND:" prompt and press **ENTER**. You are prompted by computer messages to give the *userid*(s) of the person(s) you would like to send the message to. **You will be asked to choose an editor. Type in the name of the editor you** wish to use, or press **ENTER** if you don't want to use one. (The word **none** appears in parenthesis, which means that using no editor is the automatic choice, or default. There are ways to change the default if you plan to

always use a particular editor.) Exit the editor after you are finished composing your message. (Press the **CTRL** key and then **d** after you are finished, if you are using the **none** editor.) Then press **ENTER** when you are asked whether to send, abort, check spelling, or edit your message. You will receive an announcement that your message has been sent. Type in the *userids* of any additional recipients, or press **ENTER** if there are none.

7. You will periodically need to do some housekeeping and delete unwanted messages. You can either delete the current message or specify the number of another message you want deleted. To delete the current message, type **d** and then **ENTER** at the prompt. To delete another message, you must specify the message number also. For example, to delete message #4, type **d 4** and then **ENTER**.

8. To leave the email program, use the **quit** command **q** at the "ENTER COMMAND:" prompt. This will return you to the Unix % prompt.

If you are interested in receiving some structured training in the use of **msg**, you might consider attending two courses offered by the GPCC: *Introduction to NOSC Electronic Mail* and *More on NOSC Electronic Mail*. See Appendix C for a description of the courses.

## Logging Out (Unix)

1. When you are finished using the computer, you must log out before you turn off your terminal or PC. To log out, type **logout** at the Unix % prompt and press the **ENTER** key. The system will display something like this:

```
% logout
SESSION 1 CLOSED TO OE19,1
#
```

2. You may also use a shortcut by typing in a period and pressing the **ENTER** key as follows:

```
% .
SESSION 1 CLOSED TO OE19,1
#
```

# Appendix C

# GPCC TRAINING COURSES FOR EMAIL

## GENERAL

Below are short descriptions of the formal electronic mail courses offered by the GPCC Training Center. Although *Introduction to VMS* is not specifically an electronic mail class, it is mentioned because some time is spent teaching students about the VMS mail utility and there is no one course dedicated to VMS mail.

There is a charge against a valid account or NOSC job order for all courses except the *GPCC Orientation* course, which is free, and appropriate manuals or handouts for each course are distributed during the course at no additional cost. Specific course dates and costs are listed in the *NOSC Computing Highlights*. For any computer training questions, or information on registration procedures, course content, or course dates, you may call 553-2245 or 553-2264 or send email to *gpcctrain*.

## INTRODUCTION TO MICROMAIL

This one-session three-hour class offers basic information on the PC electronic mail utility, micromail (**umail**). The course covers accessing micromail and the basics of sending and receiving mail. Students will learn how to access DOS from within micromail and how to find a person's *userid* using the **pb** (phonebook) command on the PC. The *Introduction to PC's* course is a prerequisite, and the *GPCC Orientation* course is recommended. Knowledge of a PC editor is helpful, but not a requirement.

## INTRODUCTION TO NOSC ELECTRONIC MAIL

This one-session three-hour class offers basic information for the novice users of the NOSC electronic mail system. The course covers accessing **msg** and the basics of how to send and receive mail at the intermediate level. The *GPCC Orientation* course is a prerequisite. Knowledge of a Unix editor is helpful, but not a requirement.

## INTRODUCTION TO VMS

This two-session six-hour course provides an introduction to the VMS operating system. It is aimed at beginners who would like a general overview of some basic features of VMS. Students will learn how to log on and off a VMS computer, how to use the DCL command-line format and special command-line features, and how to use the on-line help facility. Emphasis will be placed on understanding file and directory concepts, and students will be given hands-on time to practice creating and manipulating files and directories. This class will also cover global filename and directory characters, and students will learn additional file and directory commands. Finally, this course will briefly cover how to read and send messages using the VMS mail utility. There are no prerequisites, but the *GPCC Orientation* course is recommended for those with little or no computer background.

## MORE ON NOSC ELECTRONIC MAIL

This one-session three-hour class is directed toward more experienced users of the electronic mail system. It covers additional capabilities of **msg**, including customizing electronic mail to better fit your needs, filing your mail, mailing to groups of individuals, sending files, and much more. This class is intended for people who already have at least two weeks' experience using electronic mail. It assumes you know how to sign onto the computer, call **msg**, and use email to send and receive messages in the intermediate level. This course will be scheduled at least two weeks after the *Introduction to NOSC Electronic Mail* class to allow students to sign up for both classes if they wish. The *Introduction to NOSC Electronic Mail* class is a prerequisite. You must also know a Unix editor or WordStar; some knowledge of Unix is helpful. For those who do not know an editor, a brief session on the RED editor is available before the class. (You must ask for it at registration time.)

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